



Webasto Products N.A. Inc.

Hollandia 300 Large

Hollandia 300 Large Sliding Shade

INSTALLATION MANUAL

(SECTION - 1)

CONTENTS OF THE WEBASTO 300 LARGE INSTALLATION & SERVICE MANUAL

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(SECTION - 2)

TOOLS

- Tape measure
- Stanley knife
- Power Shears or Power Jigsaw
- Volt or multi meter
- Wire stripper
- 12 V battery/power source 12 V
- Torx screwdriver bit no. 25 and 20
- Masking tape
- Scissors / Razor Blades
- Bulk spray trim adhesive or Spray can trim adhesive

SPECIAL TOOLS

- Roof opening layout template
- Interior headlining template
- Protective covers for interior and exterior

(SECTION - 3) PREPARATION

WORK AREA:

A clean well organized work area is an important component to a quality sunroof installation. All tools and consumables should be organized and within easy reach. Installation time is substantially improved in a well organized work area.

PREPARATION OF THE VEHICLE:

Protect the exterior and the interior with protective covers to prevent damage or dirt.

DETERMINING THE POSITION OF THE SUNROOF:

Measure the space available between the side rails of the vehicle roof. Also measure the space available between the front and rear header. The minimum integration space is **86.5 cm (34.05 in)** wide and **77 cm (30.31 in)** long.

Before positioning the layout template at a technically correct and practical front distance, also consider the cosmetic values such as:

- Space behind sun visors or consoles
- Rear of roof opening in line with rear door opening
- Average front distance between top windshield rubber and cut line of approx. 20 cm. (7.87 in)
- Front distance longer in comparison with side distances.
- Mark the roof cut line.

ROOF BOW REMOVAL:

- If the above layout procedure indicates that a cross car roof bow must be removed the entire factory headliner must be removed at this time. Take care not to damage the trim parts that are removed or loosened.
- Carefully cut the roof bow as close to the side rail as possible using tin snips or a (Magic Saw). Inserting a skid plate between the roof panel and the bow will protect the roof panel from damage during the cutting process. After the roof bow is cut at both ends, carefully separate the bow from the roof panel. A thin wire inserted between the roof panel and the bow and pulled back and forth will cut any adhesive bonding the bow to the roof panel. Retain the roof bow for dome lamp relocation later in the process.

BENCH PREPARATION OF HOLLANDIA 300 LARGE

Unpack the roof, connect to 12V power supply and check all functions.
(refer to the instructions).

Cycle the roof to the **fully retracted position.**

Remove the sunshade by pushing the slide blocks at one side inwards and lifting the sunshade out.
(large S only)

Remove:

The plastic motor cover (2 bolts M4 x 8)

The motor (2 bolts M5 x 20)

The sunshade frame (two black and two yellow bolts) **(Large - S Only)**

The retainer ring 2 bolts M5 x 8)

(SECTION - 4) INSTALLATION

1. LAYOUT OF THE ROOF OPENING LINE.

- Using the Hollandia application chart, and roof opening template, layout and mark the roof opening line. Double check the line for correct cut line dimension and that the roof opening is centered on the vehicle roof.

2. CUTTING THE ROOF OPENING

- Protect the roof panel around the opening line with masking tape during the cutting operation.
- Cut a starter hole with a hole saw or air chisel in the center of the marked roof opening large enough to insert the electric shears.
- Insert the shears and make a cut approximately 1 inch inboard of the marked line. (NOTE: Always cut counter clockwise.)
- Cut the roof opening by cutting exactly on the marked line. The metal tension in the roof is limited by cutting the opening in two phases.

3. DRY FITTING THE SUNROOF

- Position the sunroof in the (fully retracted position) in the roof opening. Check the clearance between frame and the opening in the car roof, it must be 1 to 2 mm.
(.04 - .08 in) Remove the sunroof from the vehicle.

4. APPLYING ANTI CORROSIVE PRIMER

- Using a small brush apply metal protecting primer such as Zinc rich to the entire cut edge of the sunroof opening.

5. APPLYING SEALING MASTIC

- Apply the sealing mastic to the Emerald roof. (**Use only the supplied mastic.**) Apply a 3 mm (.12 in) bead of mastic to the bottom of the outer flange of the frame all around the opening 5 mm (.20 in) from the outside. (see figure 9.1).
- An optional method is to apply the mastic to the roof panel around the sunroof opening.

6. INSTALLING THE SUNROOF

Position and center the roof in the opening. Attach the retaining ring by using the supplied bolts.

Position the **8 yellow** bolts (M5 x 8) at the front and rear. Use the **4 black** bolts (M5 x 10) for the sides only. Proceed with fastening the bolts from the middle (torque 2 Nm). Refer to **figure 9.2** for the correct position of the bolts.

7. POSITIONING THE SUNSHADE FRAME (LARGE - S ONLY)

Position the sunshade frame and fasten it by means of the 4 supplied bolts. The sunshade frame must be mounted without tension. If necessary cut away the headlining above the rear corners of the sunshade frame. Subsequently, mount the motor by means of the two bolts (torque 2 Nm). If necessary cut away the headlining above the motor. NOTE: Refer to **figure 9.3** in this manual to check the correct position of the bolts.

8. ELECTRICAL CONNECTIONS

STANDARD

- Connect the red wire to a (min. 20 Amp.) circuit This circuit must be hot when the ignition is in the on or accessory position.
- Note: avoid circuits that have a delayed shut off such as interior lights.
- Connect the black wire directly to the body for ground.
- Mount the plastic motor cover to the motor by means of the 2 M4 x 8 screws.

(SOFT TOUCH)

- Connect the solid red wire to a (min 20 Amp) circuit that is constant hot.
- Connect the red with black stripe wire to a (min 10 Amp) circuit that is hot when the ignition is in the on or accessory position.
- Note: avoid circuits that have a delayed shut off such as interior lights.
- Connect the black wire directly to the body for ground.
- Mount the plastic motor cover to the motor by means of the 2 M4 x 8 screws.

(SECTION - 5) INTERIOR TRIMMING

Always work with clean hands and clean tools. Pay particular attention the details in trimming the vehicle.

9. SUNSHADE (**LARGE - S Only**)

A- Cover all punched holes and slide blocks with masking tape before applying the (spray) glue (see fig 9.4).

Remove tape and protective plastic after glue has been applied.

B- Glue matching headlining to the bottom of the sunshade and to all vertical surfaces. Also downwards at the front and rear. Cut the headlining at the left and right hand sides along the top edge. Cut away the cloth at the slide blocks before gluing see **figure 9.5**.

NOTE: The maximum thickness of the headliner material is 4 mm (.16 in) due to the space available between sunshade and frame. Using thicker headlining material, could result in the headlining being damaged or becoming dirty resulting from contact with the frame.

C- Cut away the headlining along the opening at the handle location

Proceed as follows to mount the handle: first insert the rear in the opening and then clamp the front.

D- Cut away the headlining along the openings for the louvers. Insert the louvers in the opening, rear end first. Then tilt the louvers so that they are flat against the sunshade. Lock the louvers by sliding the speed nuts over the pins see **figure 9.6**.

10. INSTALLING THE HEADLINING

Two types of headlining may be encountered: a stretched re-usable cloth lining and a hard headlining shell which must be covered by a completely new soft stretched headlining.

Tips for replacing the hard headlining shell:

A. Relocating the interior light.

- (**LARGE - S**) Remove and reuse the part of the headlining shell or roof stiffener in which the interior light is mounted and remount this to the bottom of the sunshade frame.
- NOTE: To prevent damaging the sunshade, make sure that all mounting materials such as screws and pop rivets do not protrude from the sunshade frame.
Accomplish the above during bench prep. Attach the wiring with tape, so that it is not visible after covering the headlining. (Remember to mount an extra ground wire for the interior light.)
- (**LARGE**) If the lamp was mounted in the roof bow, remount the roof bow rearward of the sunroof. Apply foam padding if necessary between the bow and roof panel to prevent rattles. Attach to the side rails with fabricated brackets & self drilling screws.

B. Always start gluing at the front or rear when applying a new headlining. Mount the sun visors and/or inside mirror. Pull the headlining to the rear or front and glue it there.

Mount the assist straps. Glue the headlining to the sides near the door openings, particular attention to the details. Cut out roof opening, allow 3 cm.(1.18in) extra cloth

around the opening to be glued around the edge. Avoid wrinkles in the headliner when stretching into the sunroof opening.

- C. Mount the switch, key plug, and connect the interior light.
- D. Glue the material around the opening to the side of the interior ring. Cut the material just above the interior ring. Push the excess cloth into the interior ring. Position the edge trim in and over the interior ring see **figure 9.7**.

(SECTION - 6) FINAL ASSEMBLY

SUNSHADE (Large - S Only)

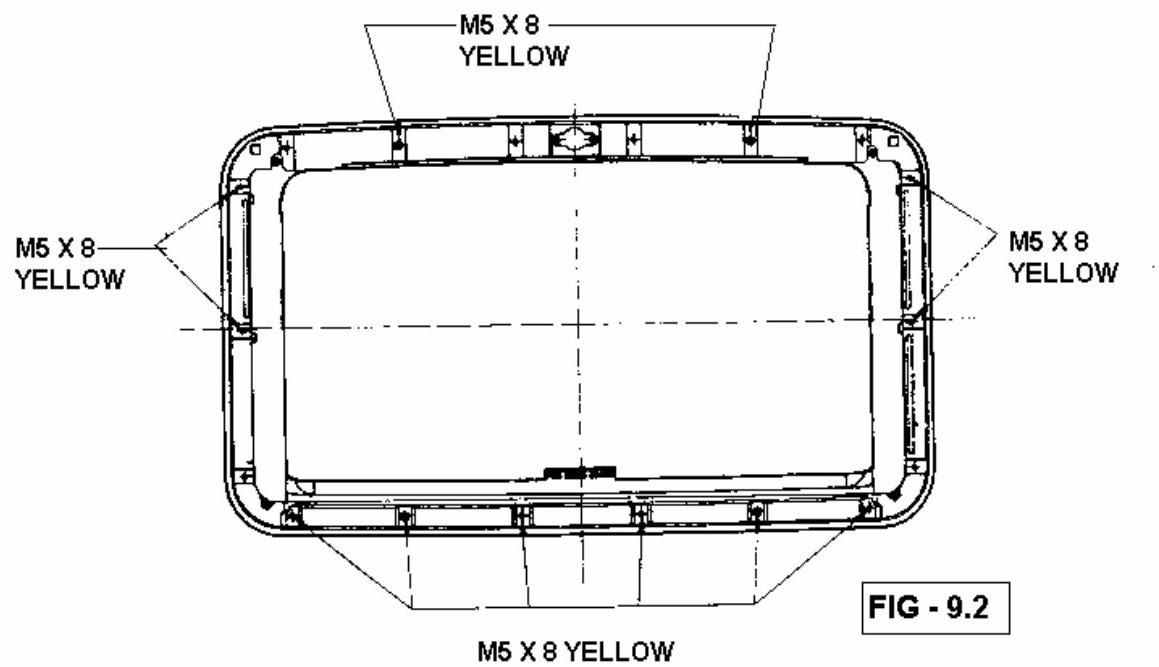
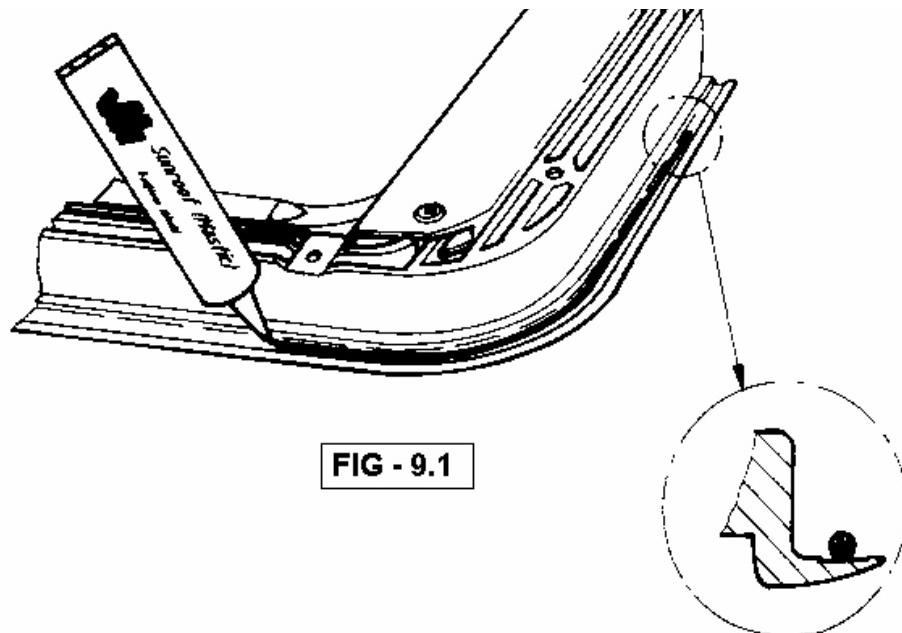
Put the glass panel in fully retracted position. Check the sunshade for curvature, headlining, dirt and damage. Push the slide blocks on one side of the sunshade to the locked position. Install the sunshade from the top.

Position the sunshade between the rails; the non-locked slide blocks first. Unlock the 2 locked slide blocks after positioning. Check the functioning of the sunshade.

(SECTION - 7) DELIVERY

Check the functioning of the sunroof, the wind deflector and the sunshade. Complaints which you could have prevented are always annoying for you and for the customer. For example, a checklist may save a lot of needless work. Make sure that the car, the interior and especially the roof are delivered clean. Put the instructions and warranty card in a clearly visible location in the car.

- 3. Check the functioning of the roof.



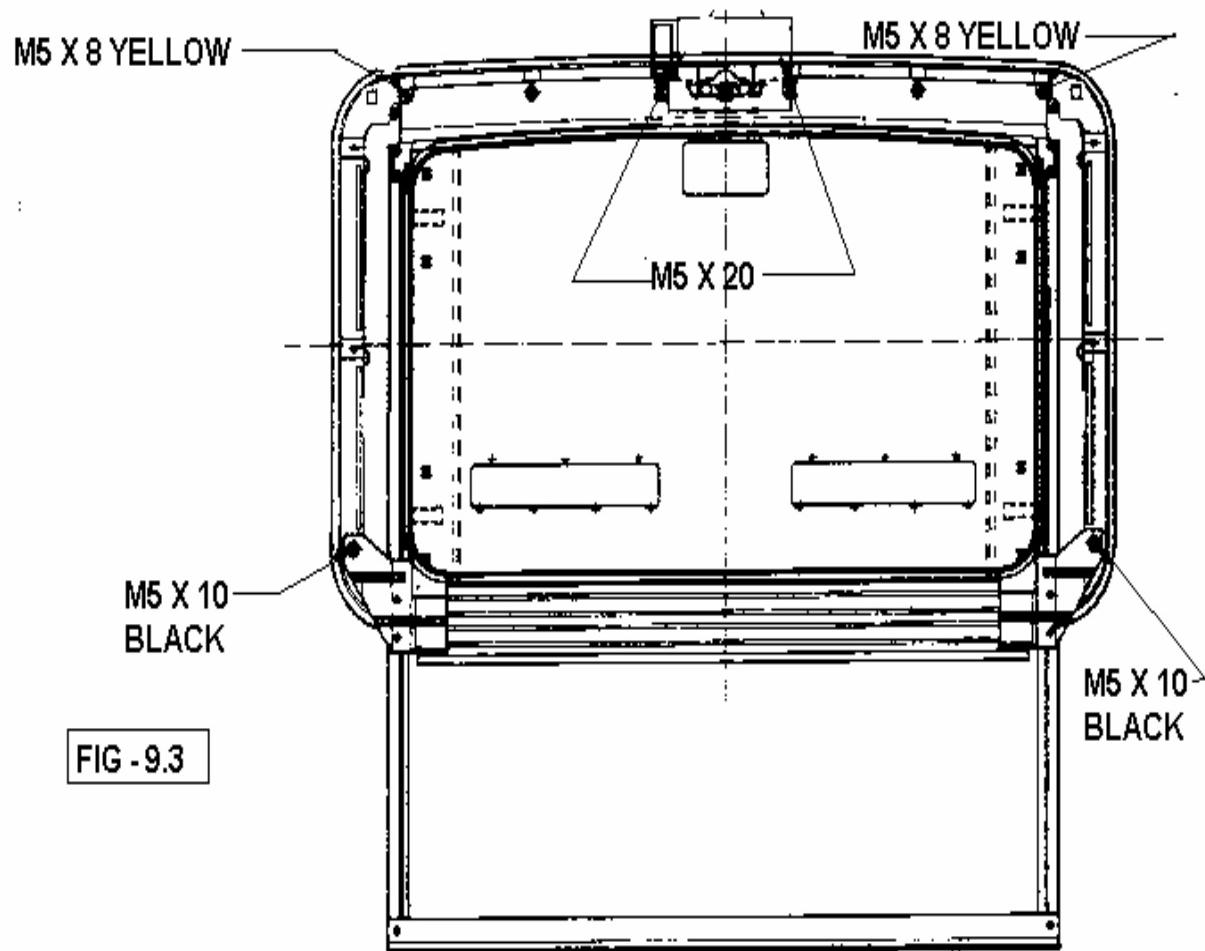


FIG 9.4

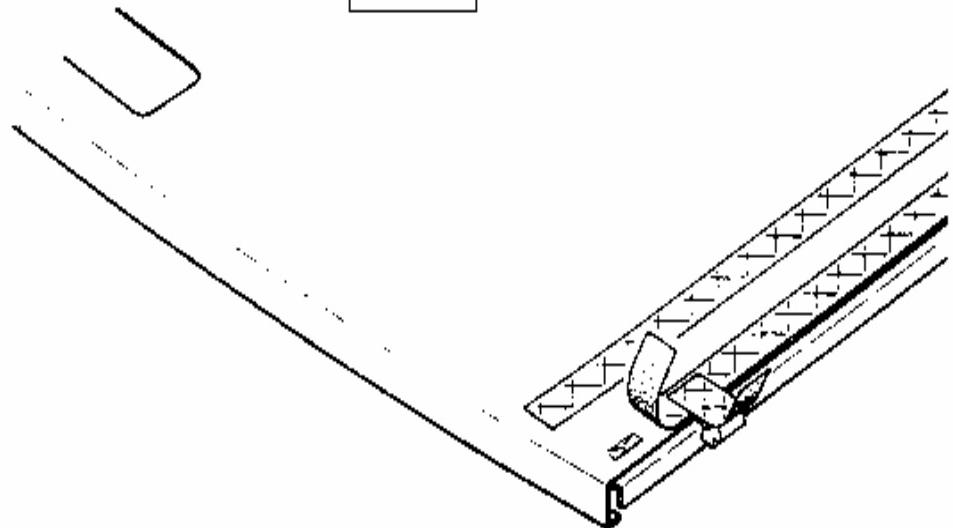




FIG 9.5

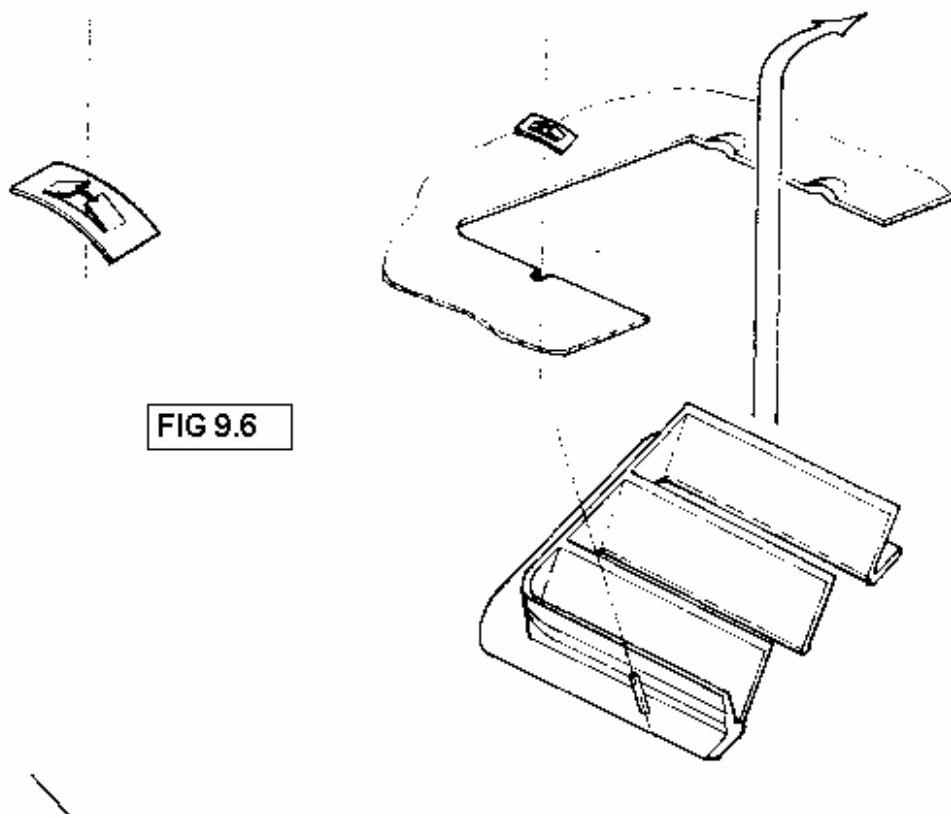


FIG 9.6

